

ABSTRACT

An inventive method provides for control of a seismic survey spread while conducting a seismic survey, the spread having a vessel, a plurality of spread control elements, a plurality of navigation nodes, and a plurality of sources and receivers. The method includes the step of collecting input data, including navigation data for the navigation nodes, operating states from sensors associated with the spread control elements, environmental data for the survey, and survey design data. The positions of the sources and receivers are estimated using the navigation data, the operating states, and the environmental data. Optimum tracks for the sources and receivers are determined using the position estimates and a portion of the input data that includes at least the survey design data. Drive commands are calculated for at least two of the spread control elements using the determined optimum tracks. The inventive method is complemented by an inventive system.